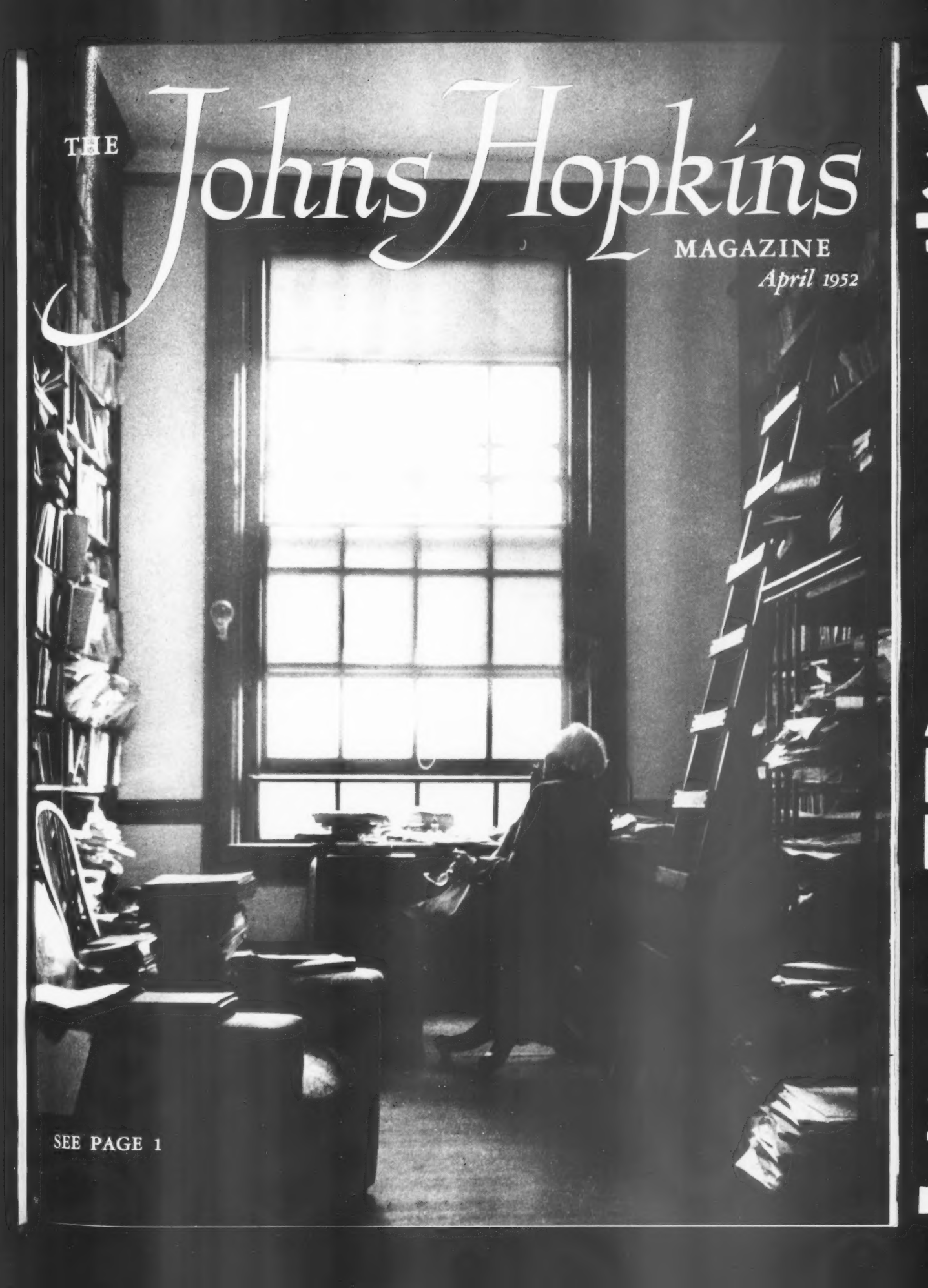
THE
Johns Hopkins
MAGAZINE
April 1952
SEE PAGE 1

Major Carl L. Sitter, USMC Medal of Honor

THE HILL WAS STEEP, snow-covered, 600 feet high. Red-held, it cut our lifeline route from Hagan-ri to the sea; it had to be in our hands.

Up its 45-degree face, Major Sitter led his handful of freezing, weary men—a company against a regiment! The hill blazed with enemy fire. Grenade fragments wounded the major's face, chest, and arms. But he continued heading the attack, exposing himself constantly to death, inspiring his men by his personal courage. After 36 furious hours the hill was won, the route to the sea secured. Major Sitter says:

"Fighting the Commies in Korea has taught me one thing—in today's world, *peace is only for the strong!* The men and women of America's armed forces are building that strength right now. But we need your help—and one of the best ways you can help us is by buying United States Defense Bonds.

"So buy Defense Bonds—and more Defense Bonds—starting *right now*. If you at home, and we in the service, can make America stronger *together*, we'll have the peace that we're all working for!"

★ ★ ★

Remember, when you're buying bonds for national defense, you're also building a personal reserve of cash savings. Remember, too, that if you don't save *regularly*, you generally don't save at all. Money you take home usually is money spent. So sign up today in the Payroll Savings Plan where you work, or the Bond-A-Month Plan where you bank. For your country's security, and your own, buy Defense Bonds now!

Peace is for the strong...
Buy U. S. Defense Bonds now!

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THE Johns Hopkins MAGAZINE

VOLUME III April, 1952 NUMBER 7

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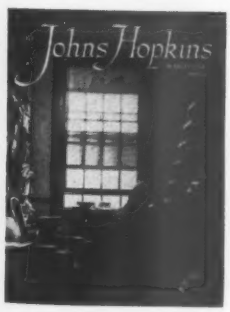

The Cover

Leo Spitzer, here shown in his office at Johns Hopkins, is the subject of the article on Page 18 of this issue. Dr. Spitzer regards himself as primarily a humanist, "devoted to man and to an understanding of man." His story is an interesting and a colorful one.

Photo by Werner Wolff

In This Issue

NEW PLANS AT HOPKINS.....*Robert H. Roy* 2
The School of Engineering's role in a program that could, in the words of President Detlev W. Bronk, "make Johns Hopkins again a pioneer in furthering the values of higher education."

DEBATE TOURNAMENT..... 6
Debating is an old and honored university-student pursuit. When it takes the form of a fifty-man tournament, it becomes a particularly active one. Herewith a photographic report.

THE CATARACT PROBLEM..... 12
Cataracts are a major, but little-understood, cause of adult blindness. Here is how modern surgery deals with them—with better than a ninety-five per cent record of success.

FRAMEWORK FOR PEACE.....*Milton S. Eisenhower* 16
From wide experience, a distinguished American suggests a program for tense and troubled times. Building peace, he points out, is a task which challenges the best thinking of all of us.

LEO SPITZER..... 18
"The old is not dead," says this scholar. "It is alive for the man who looks at it with new eyes." Here is the story of one who has spent a colorful life finding new wisdom in the past.

EVENTS OF THE MONTH: A HOPKINS CALENDAR..... 32

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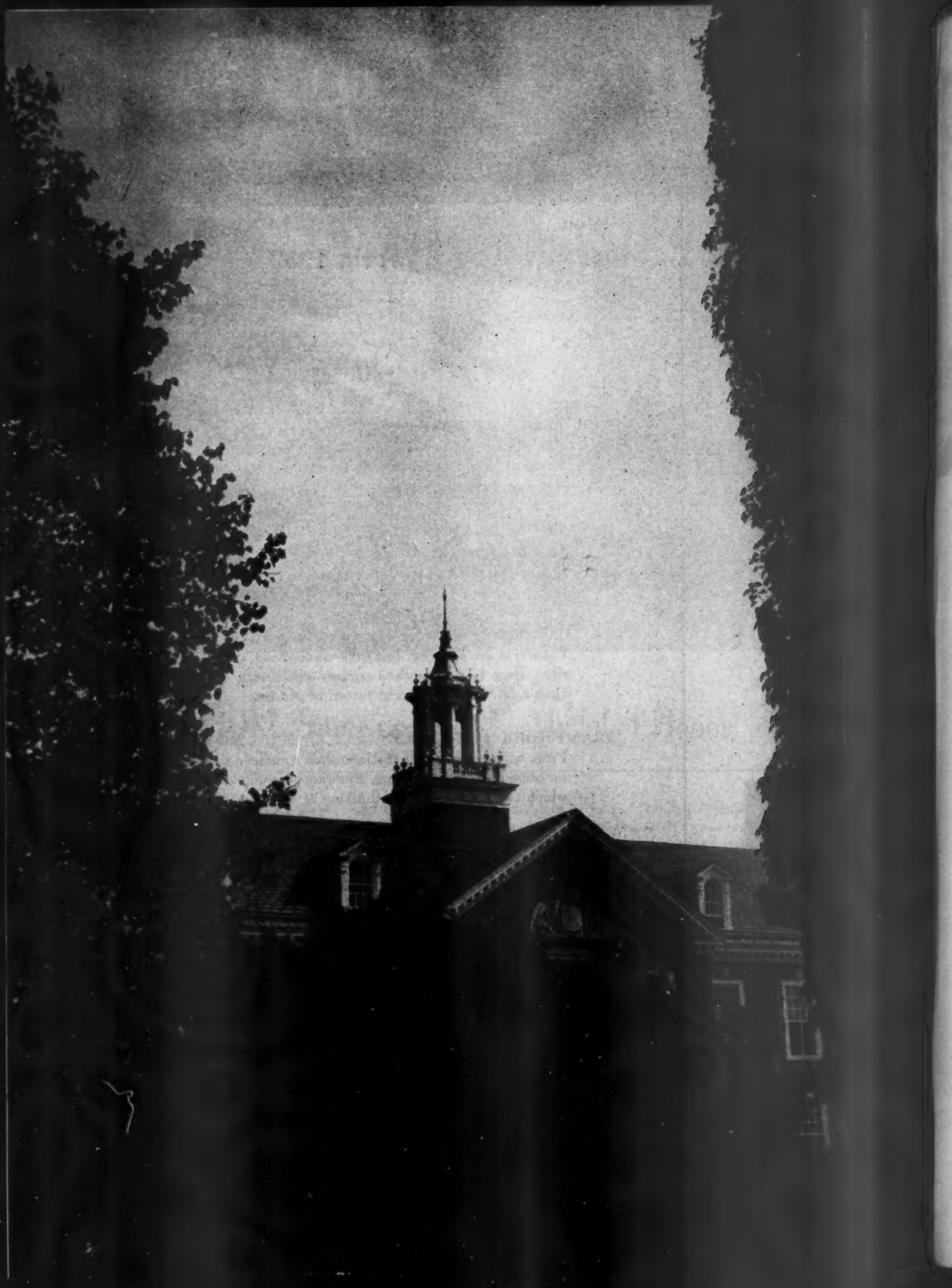


NEW PLANS AT HOPKINS

The School of Engineering's Role

By ROBERT H. ROY

Two months ago The Johns Hopkins Magazine presented an article by Professor George Boas discussing the part the Faculty of Philosophy is taking in the new educational program at Johns Hopkins which was announced last year. In the accompanying article, Professor Roy describes the School of Engineering's plans.

THE year 1946, following closely on the end of the war, brought the first opportunity to appraise the country as it stood after five years' total concentration on the war effort. At the Johns Hopkins University, a group of industrial executives and professional engineers were invited to the campus to evaluate the program of the School of Engineering. There was surprising unanimity among the visitors. There had been no preliminary collaboration, yet all agreed that in engineering the educational task could be expressed very simply:

Give the engineering student sound training in the fundamentals of science, the humanities, and engineering. Teach him to write the English language effectively. And give him some training in the art of getting along with people. Then let him acquire the applied technologies and techniques after he becomes an employee in industry.

This was a pretty clear mandate for the reversal of the largely technological training then being practiced, and it did result in some changes. Laboratory hours in a few highly specialized engineering courses were reduced, some elective courses were introduced, and other minor alterations were made. But in the main, curricula were about as rigid as before and just as loaded with courses in applied engineering.

In January, 1949, Detlev W. Bronk was appointed president of the University. In a series of meetings with various faculty groups he inspired—I use the word in its exact sense—a vast program of introspection which has involved hundreds of hours of discussion and led at last to what, quite unofficially, is called the "Hopkins Plan."

In this process of self-examination we have tried to consider what we believe engineering education should be in order best to meet the needs of society, and we have weighed these considerations against our own capabilities and our own shortcomings. The result has been a determination to increase basic training in science and the humanities, to diminish instruction in the applied engineering specialties, to cast aside the rigidity that characterized former curricula, to permit exceptional students to progress as rapidly as they can, and, above all, to set our sights on advanced training as the desideratum for engineering education at Johns Hopkins.

THESE theories are not entirely new at this University. When the School of Engineering was started three decades ago, the emphasis was placed on graduate technical training, following a thorough preparation in the basic sciences and in the principles which underlie the practice of the whole engineering profession. The conviction has grown that, since

Mr. Roy is Professor of Industrial Engineering and Assistant Dean of the School of Engineering at Johns Hopkins. Maryland Hall (opposite page) is one of the Hopkins engineering buildings.

PHOTOGRAPH BY BLAKESLEE-LANE

engineering is nothing more than the application of science, the greatest advances will be made by those who best understand science.

It has become equally clear that the engineer of tomorrow must be more than a trained professional—he must be, as well, an educated man if he is properly to assume the responsibilities that should accompany his role.

This increasing demand for a better understanding of the physical and social sciences and of the humanities makes it inevitable that the orthodox four-year engineering training will not be sufficient. The future will undoubtedly see professional engineering education carried by many up to the doctor's degree. For some, graduate instruction will terminate with the master's degree. In either case, graduate study will be the area of professional engineering to be emphasized at Johns Hopkins. In addition, there will be some students who, because of circumstances beyond their control, cannot spend more than four years in the University; for these the bachelor's degree will be offered.

As a basis for all study, each department in the Engineering School has established an essential core of knowledge prerequisite to professional courses. The elements of this core lie in mathematics, science, the humanities, and certain basic studies more closely related to engineering, such as the application of theoretical mechanics to solids and to fluids.

The speed with which students can satisfy these prerequisites will vary according to individual capacities, but we estimate that two and a half years will be required. None of these courses will be conducted by the Engineering School; the student will be entered with the appropriate faculties of the University. At the end of two years of prerequisite work, the student may be accepted by the Engineering School. Although he may not have finished his preliminary work, his membership in an engineering department will provide closer guidance of his program and a better integration with the professional work which he is approaching.

The prerequisites should not be regarded as studies outside of the student's immediate professional interest. In a very real sense the student is specializing in engineering from the outset, but he is doing so by acquiring the basic education that will ultimately be needed for high professional status.

Although there can be no doubt that both individuals and the profession will greatly profit from this type of training, it is equally clear that economic and biological forces urge a sacrifice of thorough preparation and a speedy acquisition of specific professional data. "It is precisely in this area of conflict," Professor Trueman Thompson has written,

BLAKESLEE-LANE

"We have determined to diminish instruction in the applied engineering specialties . . .

"that the plan adopted by the School makes its biggest contribution. Each candidate accepted by a department may proceed to his goal, whether it be the bachelor's, master's, or doctor's degree, at a pace determined by his own capabilities, aided by a maximum relaxation of the customary academic formalities and rigidities. Familiarity with the tools and methods of investigation will be encouraged in even the youngest students by providing direct association with research projects and the professional activities of staff members wherever possible.

"Progress toward one's goal will be measured by what he knows rather than by his exposure to formal courses. Thus it may be seen that if advantage is taken of thorough preparation and an administrative policy which permits the fullest cooperation between students and staff, significant savings may be effected in the time customarily required to obtain advanced degrees."

This is a program of lofty aims. And the attainment of these goals will be difficult. Not only must we carry out the actual mechanics of the transition, but we must win the support of the profession and we must strengthen both staff and student body. In short, we must build a better mousetrap, if the world is to beat a path to our door.

Here is a practical example of what we intend. The present curriculum in civil engineering is a fairly rigid specification of courses, many of which are in specialized areas of applied engineering. Those who

take the B. E. degree must pass such subjects as surveying, strength of materials, theory of structures, fluid mechanics, hydraulics, structural engineering, sanitary engineering, transportation problems, and highway engineering practices. It would not be an exaggeration to say that engineering subjects dominate the entire program, particularly during the last two years. And this domination, if it does not exclude, certainly diminishes desirable work in the fundamentals of physical and social science and in the humanities.

In comparison with this rigidity the new program offers a sharp contrast. Freshmen are admitted not to the School of Engineering but to the University. During their first two years they are under the administrative direction of the Faculty of Philosophy. During this "pre-candidacy," as it is called, their program includes four broad divisions:

Physical science—mathematics (through differential and integral calculus, partial differentiation, and multiple integration); general chemistry; general physics;

Social science—knowledge equivalent to one-year courses in psychology, sociology, political economy, and political science;

Humanities—knowledge equivalent to a two-year course or two one-year courses in English literature, history, philosophy, and art; language (a reading knowledge of one foreign language is required); English composition (the ability to write English effectively must be demonstrated);

Engineering—knowledge equivalent to a one-year course in descriptive geometry.

There is, as the reader may observe, only one course in engineering, and we hope that in the course of time that one will acquire a mathematical flavor. The remainder of the program consists entirely of broad fundamentals. Further, no itemized courses are specified; the term "knowledge equivalent to" is intended to mean that the student may acquire what he needs by independent study and examination as well as by course completion. Demonstration of proficiency will be the criterion. It is further intended that even these provisions will not be rigid. Students with special interests may take what they desire—within the limits, of course, of sound advising. And all students may progress as rapidly as their capabilities permit.

WHEN these basic requirements have been met (whether the study time be longer or shorter than the estimated two years), students will be accepted as degree candidates in the School of Engineering. For a variety of good reasons we intend to continue offering the bachelor's degree, but we strongly hope that the passage of time will find more and more men going on for master's and doctor's degrees. That the need for men with advanced training and research ability in engineering is acute cannot be doubted; we have heard this from too many sources to lack confidence in this vital part of our purpose.

The requirements for the three degrees follow a similar free pattern. Even in the first year of residence in the department of civil engineering, to continue using that as an example, specialized courses in that subject do not appear. The broad basis of the first two years of pre-candidacy is further extended by additional courses in mathematics and other subjects which underlie *all* engineering, such as solid and fluid mechanics and statistics.

It is not until the final year that the bachelor's candidate launches a full-scale program in engineering. We are confident that his very sound base in fundamentals will permit superior presentation at

Continued on page 25

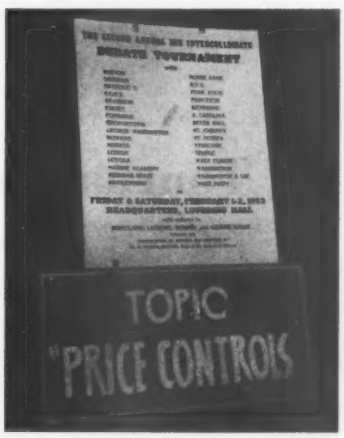
ROBERT M. MOTTAR

. . . and to increase basic training in science and the humanities."

Debate Tournament

It is a sign of renewed activity in an old student pursuit

Photographed for The Johns Hopkins Magazine by Werner Wolff, Black Star



Debating is an old and honored university-student activity. It is a valuable one, as well. From collegiate debating societies have emerged men who have gone on to conspicuous careers in politics, the law, the arts. More than one has acknowledged that among the most important instruments of his success were the argumentative skill and sharp logic fashioned on the university debating platform.

For the man who goes in for it seriously, debating can indeed provide great benefits. The key to forensic success is an ordered mind—one that can develop ideas coolly and logically and spot the flaws in spurious reasoning. The debater who lacks such mental discipline must either cultivate it or quit the sport.

Debating has had its ups and downs in American universities. Once, around the end of the nineteenth century and the beginning of the twentieth, it was enormously popular, drawing great crowds of spectators (there were times when justices of the United States Supreme Court journeyed from Washington to judge the Johns Hopkins team). And there have been occasions when the debaters could scare up no audience at all, except for members of the opposing team.

Today, if recent events at Johns Hopkins are an indication, interest in debating is having an upsurge. Radio and television have helped (since the war, Hopkins debaters have made frequent appearances on local stations). But many followers of the sport think that the growing interest may be attributed to deeper causes than these: mainly an increasing concern among university students and the public at large for subjecting important issues of the day to logical analysis and discussion.

Whatever the reasons, the activity is flourishing. In holiday seasons, debaters from Hopkins and nearly every other college and university take to the road for long swings around the country; on weekends there are shorter trips; freshman teams have been developed as training grounds for the varsity.

The zenith of activity occurs at big intercollegiate debating tournaments. For two years now, Johns Hopkins has been the scene of one, sponsored by the University's Debate Council. Teams are invited from New England, the South, and as far west as Indiana for a weekend of round-robin argument. The result, as the pictures on these pages show, is not only a strenuous series of debates, but also a highly stimulating one.

This is the typical debate scene: one man presents his arguments while his partner (*left*) marshals facts and opponents plot their rebuttal.

Dick Stang (*center*), of Hopkins, coordinated tournament events.

Wire-recorder was used to take down important talks.

Tournaments are strenuous for all who take part

Neither running a debate tournament (*left*) nor participating in it is an easy job. In the photographs on this and the opposite page are some of the reasons why.

There is the simple matter of endurance, for one thing. Between lunchtime and dinner on the first day, and until well after dark on the second, most participants were engaged continuously in either standing on their feet and talking, or furiously scribbling rebuttal notes as their opponents relentlessly threw arguments their way. Lest they spend their first evening resting tired throats, their Hopkins hosts arranged a stiff contest in after-dinner speaking in which many took part and grew hoarser.

There were occasional intermissions, during which some teams were able to grab catnaps (*opposite*). But most entrants refused to relax even then. They used the time for practice sessions—and more talk—instead (*top right*).

Hopkins debaters played hosts, were kept busy (*above*) pairing teams.

Between rounds, West Point team maps its strategy.

Weary debaters got rest as best they could.

Tournament ended in a three-way tie. Here Princeton team (*two men at right*) meets South Carolina in final play-off.

A tournament judge tallies his scoresheet.

Pro . . .

Each two-man team entered in the tournament (altogether there were twenty-six colleges taking part) came prepared to debate both sides of the official topic, wage and price controls. Alternately, throughout the tourney's six rounds, the entrants were required to argue convincingly *for* price controls and (just as convincingly) *against* them.

At any one time during the two-day contest, thirteen separate debates were going on around the Hopkins campus—all on the same subject. In six rounds, price controls were thus considered from all angles seventy-eight times. When a three-way tie developed between Loyola College, South Carolina, and Princeton, two play-off debates were added to this impressive total.

Strangely enough, despite all the chances for repetition, the debaters managed fairly successfully to keep their arguments from sounding like a broken record, although some tournament judges, after listening to all rounds, confided that they

A Princeton man readies his argument.

and Con

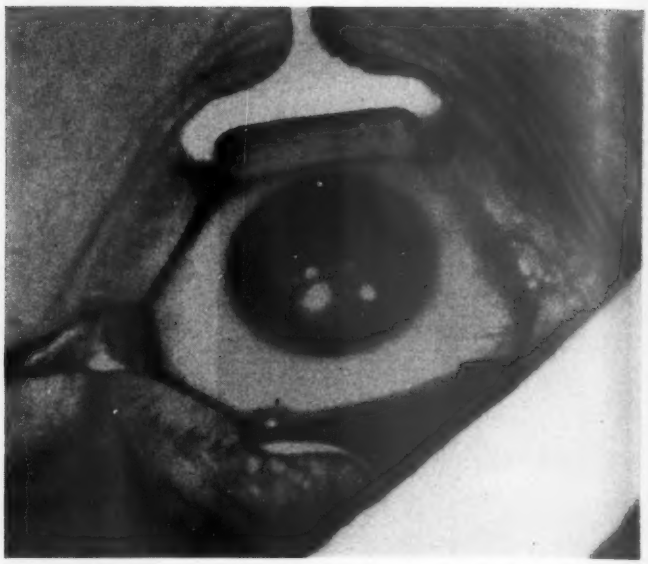
had heard just enough about price controls to last them for a while.

In winning points for his team, a debater's voice and gestures are relatively unimportant. It is his use of facts that counts. He must be able to cite authority and to document his statements fully. And he must be capable of devising on short order a thoroughly logical speech; many debaters were marked down because they tended to meet their opponents' arguments simply by grabbing a handful of file cards containing notes and reeling off a series of impressive, but irrelevant, citations of authority.

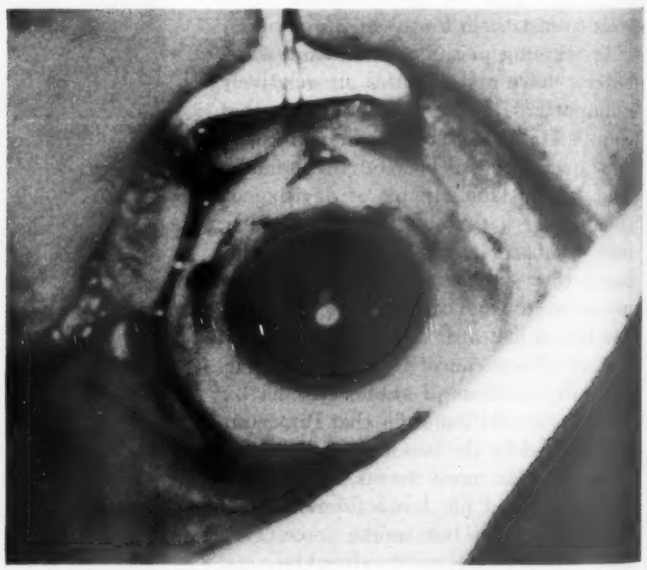
It was at all these skills that Princeton, represented by the two men on this page, excelled. Like most teams, the Princetonians carried file boxes (*above*) full of apt quotations; but unlike some, they used this ammunition discriminately and with devastating effect. They were quick to spot flaws in their opponents' reasoning and methodical in building strong cases of their own. They won the tournament.

The Cataract Problem

Cataracts are a major cause of adult blindness. Here is how modern surgery deals with them—with better than a 95 per cent record of success.



Eye before extraction of a cataract. Note clouded lens. Many people think of a cataract as a film or scum growing on the front part of the eyeball, but actually it is simply a clouding of the crystalline lens of the eye. Most frequent type is the senile cataract: a gradual clouding of the lens which comes with age. Its actual cause is unknown, despite exhaustive research.



The same eye after cataract has been removed. In an entirely painless operation, the clouded lens has been extracted. The round pupil is preserved, giving a normal appearance to the eye. It is no longer necessary to immobilize the patient; within a few hours he may sit up and after twenty-four hours he may begin to walk. Today some 95 per cent of such patients recover normal or nearly normal vision.

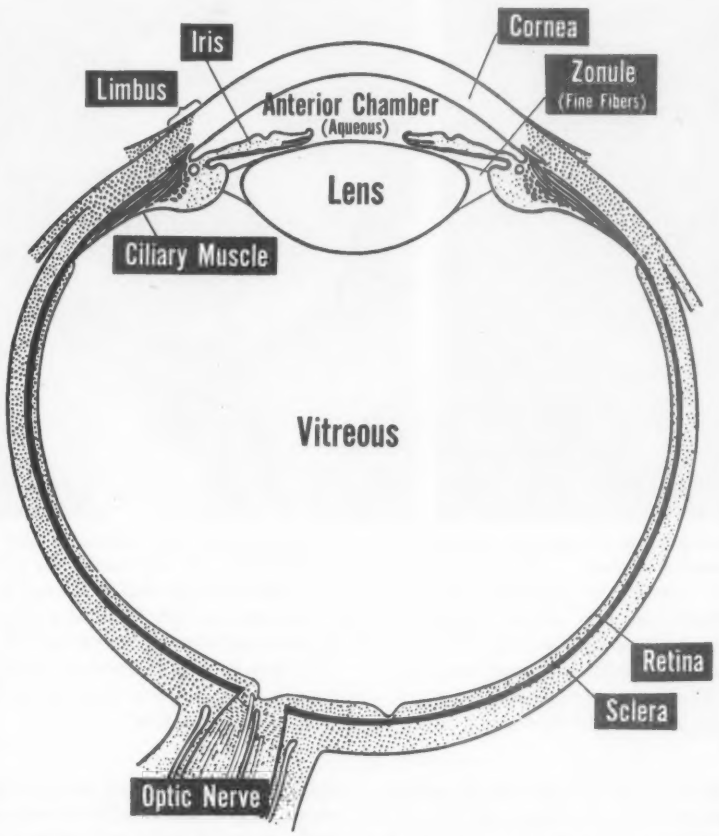
THE term "cataract" carries to the average layman the implication of a remorselessly developing blindness, the spectre of a hazardous and painful operation and a long period of convalescence during which he must be absolutely bedridden and immobile. Finally, as a faint ray of hope to bring him through this disaster, he anticipates only the acquisition of an artificial and probably defective vision. No conception of the cataract problem could be further from the truth.

What is a cataract? Many people conceive it to be a film or scum growing on the front part of the eyeball—a clouding of the normally clear cornea. Actually it is quite different. A cataract is simply a clouding of the crystalline lens of the eye.

The derivation of the word itself is interesting. The ancients, the Greek and Latin physicians, erroneously believed the crystalline lens to be the true site of vision, completely ignoring the insignificant retina they found when they dissected the eye. They were unable to reconcile this view with an actual clouding of the lens itself and therefore interpreted the whitish opacity they saw through the pupil as a falling down of "perspired" matter behind the iris and in front of the lens. Hence the term "cataract."

The crystalline lens is a peculiar structure. At birth, and through infancy and childhood, it consists of a soft colloid material. As the individual grows older, the lens grows in size, quite out of proportion to the other tissues of the eye. If some compensatory condensation did not take place, the lens in adult life would fill the greater part of the eye's interior.

This growth of the lens is due to the gradual laying down and growth of new fibers. As a result, the soft fibers on the interior of the lens are compressed. Gradually they form a compact, hard nucleus. The process continues throughout life. Whereas in children the lens is a soft, yielding, absorbable structure, in adults it is a hard, unyielding structure which cannot be absorbed. The difference accounts for the different operative procedures on cataracts in older and younger people.



The human eye, as this view from the top shows, consists of three "tunics":

1) *The outer tunic: the clear cornea in front* (top) *and the opaque white fibrous sclera behind. The cornea and the sclera form an envelope which houses the contents of the eye.*
2) *The middle coat: a pigmented layer known as the uveal tract. Only the anterior portion of this, the iris with the central pupil, is visible through the clear cornea. The uveal tract is the nutritive coat of the eye.*
3) *The inner tunic: the retina. The nervous tissue of the eye, it may be likened to a photographic plate. Behind the iris lies the crystalline lens, which, with the cornea, bends the rays of light entering through the pupil and focuses them on the retina.*

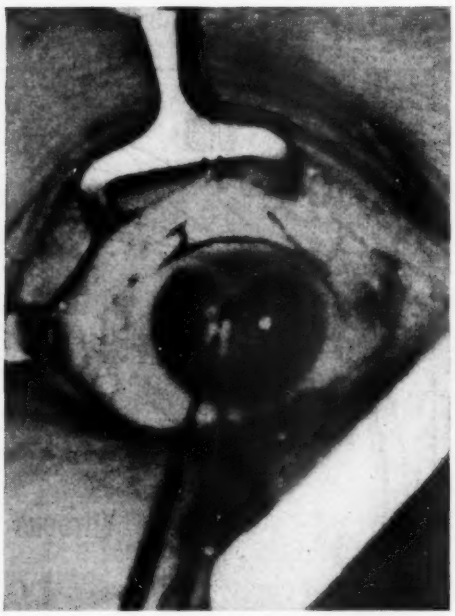
The anterior chamber, the space between the iris and the cornea, is filled with a fluid known as the aqueous. The large cavity back of the lens is filled with a gel known as the vitreous. The crystalline lens, in its capsule, is suspended by a network of fine fibers known as the zonule. The lens normally is clear, preserving the clarity of the embryonic tissue, and rays of light pass through it unimpeded to the retina.

Congenital cataracts—opacities of the lens due to a faulty development of the eye—occur in infants. They do not progress. If they are of sufficient size to block the passage of light into the eye, then they must be removed in order to allow the child to see.

The removal of a congenital cataract is a rather simple matter. If, in the eye of a child, the lens capsule is ruptured, the soft lens protein will absorb the water from the aqueous (*see drawing*),

This article was prepared for The Johns Hopkins Magazine by a physician who prefers to remain anonymous.

These pictures show steps in modern operation to remove cataract. Patient is brought to operating room relaxed and easy in his mind, through administration of sedatives. Then, with injection of novacain and adrenalin (above), *eye is made completely insensitive.*

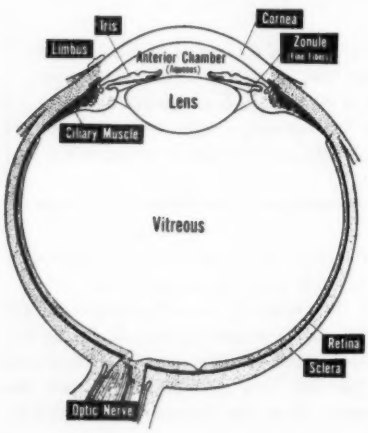


Conjunctiva—the thin mucous membrane covering eyeball—is incised over upper half of eye and a flap turned back over the cornea (above). *Non-penetrating incision is then made at junction of cornea and sclera, forming a groove and marking site of final incision.*

Sutures are placed in this groove. These pre-placed sutures are then pulled aside, out of groove, to allow passage of knife which makes final incision (next photograph). *Pre-placed sutures are an outstanding feature of modern cataract operation.*

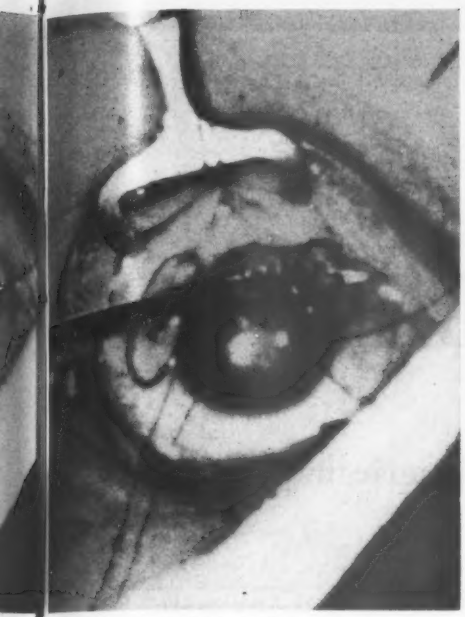
will swell, and will become completely opaque. This swollen, opaque lens substance then may gradually be completely absorbed.

Thus, to remove a congenital cataract, the capsule of the lens is incised by a sharp needle knife. The aqueous is absorbed by the lens fibers, swells up, and in time is absorbed itself by the capillaries inside the eye. Sometimes several such needlings are necessary to obtain full absorption of the lens, and occasionally it is advisable to wash the entire lens substance out of the eye rather than wait for it to be absorbed. In any event, the operation for congenital cataracts in children is relatively simple. It has been greatly overdramatized in the public press.



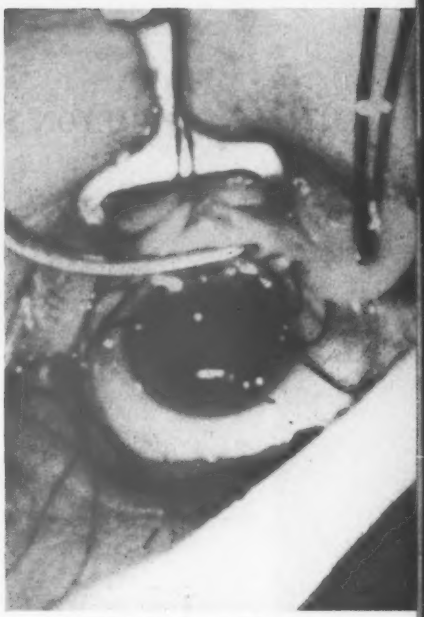
BESIDES the congenital phenomena, there are a number of different kinds of cataract. They may be caused by trauma, by radiant energy, by electric shock, and by certain poisons. But by far the most frequent type is the senile cataract: a gradual clouding of the lens which comes with age. Cataracts usually begin to develop in the sixth decade of life, but they may occur earlier, even in the thirties. It is impossible to predict how rapidly cataractous changes, once recognized, will progress. Progress may be rapid or extremely slow. In general, the younger the patient developing cataracts, the more rapid the progression, and the older the patient, the slower the progression. Despite exhaustive investigations, the actual cause of senile cataract is unknown.

What is the problem facing a person who finds he is developing a senile cataract? First he must realize that his cataract is simply the development of a cloud in the normally clear lens which prevents the free passage of light rays back to the sensitive retina. There is usually no other disease of the eye. Second, he must understand that this mechanical block to the passage of light can be removed at any time that it reduces vision below his individual needs. The veil between the retina and the outside world is removed by extracting the cloudy lens from the eye—the removal of the cataract. Thereafter a strong lens is worn in glasses in front of the eye, to bend and focus the rays of light on the retina—a task formerly done by the eye's own crystalline lens. It is no longer necessary to wait until the lens has become fully opaque, or the cataract "ripe" or "mature," before undergoing the operation. Third, the operation, with new methods of local anesthesia, is entirely painless. Fourth, with modern



Corneal incision is then made (above). *Incision is widened along previously made groove until it is large enough to permit passage of the lens.*

Forceps (center) *are introduced into anterior chamber. Lens capsule is grasped at its lower pole. By rocking lens and with counter-pressure, fine fibers supporting lens are ruptured and lens is removed.*



Lens (right) *is removed intact and in its capsule. Iris is carefully stroked back into normal position. Preplaced sutures will be drawn tight and tied. With firm closure of wound, patient need not be immobilized.*

methods of closing the operative wound, prolonged immobilization after operation is unnecessary. Fifth, in the hands of a competent ophthalmic surgeon the patient has more than a ninety-five per cent chance of regaining full accurate central vision.

WHEN should the cataract be removed? The indicated time for operation varies with the patient's individual needs.

Vision is expressed by a fraction in which the numerator expresses the distance in feet from the patient to the test object, and the denominator expresses the size of a letter which at that distance in feet will subtend an angle of five minutes on the retina. Thus 20/20, or normal vision, implies that at a distance of twenty feet the eye can distinguish an object which, at that distance, subtends an angle of five minutes on the retina. Vision of 20/40 means that at twenty feet the eye can distinguish only a larger object, one which subtends a similar angle at forty feet—about one-half normal vision.

We can read ordinary newspaper print with 20/40 vision. When vision falls below this level, we require some artificial aid, a magnifying glass. Even then, we can read only with difficulty. Thus a student or professional man who requires accurate near-vision becomes a candidate for cataract extraction when the clouding of the lens reduces his vision below 20/40. On the other hand, one can carry on the ordinary business of living quite well—provided he has no need of accurate near-vision—with 20/70 or 20/100 vision. Below this level, the handicap of poor vision becomes increasingly evident.

There is, however, one qualification to the dictum that operation is indicated when vision in one eye has fallen below the 20/40 level. An eye from which a cataract has been removed cannot be made to work with an eye in which the lens is still present. After cataract extraction, images seen with the operated eye are one-third larger than those seen with the unoperated eye. These different-sized images will not blend together to give binocular vision. Therefore, if one eye has a cataract with less than 20/40 vision and the fellow eye still has a full 20/40 vision or better, the patient will gain little or nothing by having the poorer eye operated upon. He would continue to use the natural vision in the unoperated eye.

However, if the cataract in the poorer eye becomes complete or fully mature, then it had best be operated upon—not with the idea of using it for accurate central vision along with the fellow eye, but to restore the field of vision on the blind side. Since there is sufficient vision in an operated eye, even without the correcting lens, to allow the patient to see large objects, a cataract operation in such a person opens up the field of vision on the formerly blind side. He would wear no correcting lens; thus the confusion of attempted binocular vision with the unoperated eye would be avoided.

A second reason for cataract extraction in a patient who has good vision in the fellow eye is that the cataract is becoming overripe, or hyper-

Continued on page 24

By MILTON S. EISENHOWER

FRAMEWORK F

Building it, a distinguished American points out, is a ta

LET me begin by making a perfectly obvious observation: The people of the United States want to live and let live, yet we find ourselves fighting a restricted war and preparing for a global conflict which we hope desperately may be avoided.

Post-war tensions have caused confusion, frustration, and a sense of defeatism in the United States. One reason is, to be sure, the unpredictability of the whole stream of events. But two new facts of our history also have a bearing on our present state of mind.

Throughout most of our development as a nation, beginning with 1620 and proceeding almost without exception to 1945, we of the United States, in spite of all impediments, experienced only *complete success* in everything we undertook. We conquered a wilderness, won wars, built the production marvel of the world, achieved the highest level of mass education in history, and made enormous strides in the sciences and cultural affairs generally. We knew only quick, complete success.

But now we find ourselves in a complex situation which will not be resolved quickly and in which there may never be complete or definitive success, as we have known success in the past.

Our present situation is quite different from anything we have encountered before, save for the possible exception of the Civil War: we are now in a mighty struggle that is not so much for geographic empire as for intellectual empire. It is a struggle for the mastery of men's minds and men's very souls. And such a struggle—as may be witnessed by the lingering effects of our own Civil War—is not resolved in five or ten years, or even in a generation.

The realization that *good* may not necessarily, and certainly not quickly, triumph through our immediate efforts, as it always has before, forces upon us a psychological and philosophic adjustment which is difficult for us to make.

A second new fact is that we can no longer employ war successfully to gain noble ends. We have heretofore used war to effectuate national policy: to establish freedom, to protect the Union, to save democracy. And we will fight again, if we must. But we won't truly serve our larger purpose if we are compelled to fight, for modern war will create the human misery and the economic and social chaos in which communism thrives and democracy tends to die.

We are at a period in our history when, while remaining so strong that our enemy does not dare to attack, we must employ reason, persuasion, and moral example to gain our goals. This factor, too, has contributed to a sense of confusion, frustration, and defeatism.

But while our situation is different from what it has been in the past, I do not think it is either

FOR PEACE

a task which challenges the best thinking of all of us

"I confess," said the author (*right*) as he began his Commemoration Day address at Johns Hopkins on February 22 (from which this article is adapted), "that while I once fancied myself something of a specialist in some phases of international affairs, I no longer do so. Now that the big lie and treachery have replaced truth and honor in a vast segment of international life, I do not know that anyone can trust his own history and observations in trying to foresee the future. In many respects, logic has had to give way to outright guessing, and every action seemingly is a calculated risk."

hopeless or even more difficult than problems our forefathers solved and we ourselves have conquered.

I doubt that this intellectual struggle should loom more perplexing in our thinking than did the problem of 1776 in the minds of our forefathers. Only a third of the people then wanted freedom, and a third didn't care. But a third wanted it badly enough to get it.

I doubt that our modern situation is more difficult for us than were the issues of the Civil War period to our forefathers. And I doubt that our problem is more difficult than that which we ourselves faced in 1941 when, confronted by two powerful enemies, we lay all but helpless following the infamy at Pearl Harbor.

While we can no longer use war successfully to achieve our ends, my own view is, candidly, that there is nothing under the sun which the free nations of the world cannot accomplish, if they will. We have the resources, the manpower, the skills, and the social organization essential to a tremendous and ultimately successful cooperative effort. We can literally do anything we make up our minds to do. It is necessary for us first, however, to agree among ourselves on what we want to do, and then to spell out a program in terms so simple that the hundreds of millions of persons who constitute the free nations may understand it and work for it.

From the perspective of a jet airplane, soaring to its greatest height, I am going to suggest to you a framework within which a total program

Continued on page 28

LEO SPITZER

"The old is not dead," he says. "It is alive for the man who looks at it with new eyes."

Photographs for The Johns Hopkins Magazine by Werner Wolff, Black Star

A UNIVERSITY president, impatient with the humanists on his faculty, once told them: "Gentlemen, I don't understand you. You are continuously rehashing the old. Why always look back? Why not turn toward the new? You bury yourselves under finished history when so much valuable work needs to be done in science."

Philologist Leo Spitzer, a scholar in one of the most abstruse of fields, is indignant at such a criticism. "Rehashing! What a definition! Ours is not a fruitless rehashing. We are *rethinking*, *reunderstanding* the old. The old is not dead; the old is alive for the man who looks at it with new eyes.

"There is a mathematician here at Johns Hopkins who spent several years reading and studying the works of an ancient Greek mathematician. So thoroughly did he 'rehash' that he has been able to take up new work at the point where the Greek left off.

"Every generation must recreate its own Plato, its own Shakespeare, its own Newton. And one may well discover new wisdom by reinterpreting the vast accumulation of past learning."

Leo Spitzer holds the Hopkins post of professor of Romance philology, a field which he defines as the study of the civilization of the Romance peoples as this appears in their written documents and as it has developed from Greco-Roman and Judeo-Christian sources. Though philology, etymology, and similar studies are generally classified as pure "ivory-tower," Dr. Spitzer regards them as a critical essence of that larger need, the understanding of man. "The modern trend is very curious: that ardent desire to know the truth about nature while neglecting the study of man! While we know a great deal more about nature than did Aristotle or Thomas Aquinas, we lag woefully behind those humanist-scientists in knowledge about man in relation to the universe. When it comes to appraising the meaning of a text, of a civilization, of history, we are utterly defeatist. Among us there are scholars who despair and think that we can no longer understand man at all!"

World War II was largely a war of scientists. Chemists, physicists, engineers, biologists—their roles are well known. And the philologists: were they useless for warfare? "Far from it," says Dr. Spitzer. "They were in Intelligence. After all, counter - intelligence work, dealing as it does with the spoken or written words of the enemy, is essentially philology—understanding man in concrete situations which may never repeat themselves. Not general laws as much as the concrete, the particular, is what concerns the philologist."

As a student, Dr. Spitzer found linguistics as dull and tedious as would Tom Sawyer. "The professor would spend days discussing the development of the 'e' in a particular text of Thirteenth-Century French, or the nasals in a remote Portuguese dialect. It was terrible, but the very asperities of the subject offered a lesson in objectivity and discipline."

But then he became interested in stylistics, analyzing the words an author uses and from them deducing his psychology. "Like many readers of Rabelais, I had been fascinated by his excessive use of facetious epithets. Critics had ascribed these to his pedantic vein and to the heavy touch of his

generally realistic humor. For example, he caricatures his enemies, the theologians of the Sorbonne, by calling them Sorbonards and Sorboniformes, by using puns such as Sorbillants (the tipplers) and Sorbonagres (wild asses), and finally by such senseless denominations as Saniborsans and Niborcisans. But faced with a sequence of such words, the reader feels that the world of reality has been shattered.

"Then I began to realize that this wild unreality should be linked with Rabelais' other weird fantasies. He imagines the shadow of a convent as 'fecundating.' He says that Arctic words, once spoken, freeze and become solid objects which can be thrown on the deck of Pantagruel's ship and seen by human eyes in the colors they assume: 'golden', 'azure', 'bloody words'. Gradually the linguistic details led me toward an understanding of the essence of Rabelais' creation—the presentation of fantastic and monstrous unreality as entirely real."

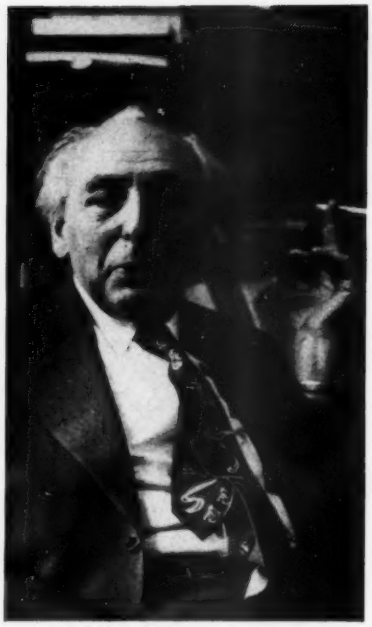
This method of study, called the Circle of Understanding, forms the main tool of the philologist. Dr. Spitzer explains the technique as no more than an extension of our usual manner of forming judgments. "A young man walks into my office. The first thing that strikes me is some inconsequential detail, such as a flashy tie. What do we do in everyday life when we make an acquaintance? We isolate some such striking detail from the whole personality.

"We then proceed to a tentative psychological hypothesis: I decide that this man is given to asserting his personality at the expense of good taste.

"The next step consists in verifying whether the same characteristic extends to other areas of his personality. If my original hypothesis is correct, observation of numerous other details will confirm it. The 'circular' procedure consists in passing from observed detail to hypothesis and back to other details."

Critics of this method are fond of calling it "a vicious circle." Yet it is a basic method in research. A scientist, for example, may observe a physical phenomenon, develop a principle to explain it, then test to see whether or not the principle applies to other parallel phenomena. Only when it does is the principle correct.

In many of its phases, philological research smacks of detective work.



Etymology, the search for the origin of words, requires considerably more than a facility with languages. The English word "money" can easily be traced through the French "monnaie" back to the Latin "moneta".

"But at this point," says Dr. Spitzer, "the semantic problem arises. For 'moneta' is connected with the verb 'monere' meaning to warn or admonish. What possible connection can there be? We then turn to history. We look to see where the money was made. We find that the Roman mint was, for a long time, located within the Temple of Juno. And Juno, we recall, was named The Admonisher."

Etymology is to Dr. Spitzer one of the most delightful phases of his work because of the unexpectedness of its revelations. "Quandary" and "conundrum", for example, have quite different meanings in our language. Yet both have been discovered as springing from the French "calembour" which carried the double meaning of "ambiguous speech" and "pun".

Other histories show a reversal of this process; instead of one word splitting into two, two quite separate words are combined into a single product. The modern word "lazaret" (with its variant "lazaretto") means a hospital for leprosy and other infectious diseases. One immediately thinks of Lazarus the leper, but the relationship is not close enough to satisfy the philologist. Dr. Spitzer's studies on this word led him to the history of Venice. He found that on one of the islands had stood the Church of St. Lazzaro (a form of the name Lazarus). On an adjoining island had stood the Church of Santa Maria di Nazareto, and in the fifteenth century this building had been used as a pesthouse. The word "lazaret" resulted from a combination of the two church names, Lazzaro and Nazareto.

In these etymological studies, as well as in stylistics, Dr. Spitzer's monotheistic training is evident. His effort is always to discover the single root—be it one word or one psychological idea—from which the words or the works of art have sprung.

The unity after which the philologist strives is achieved only after he has acquired knowledge in many linguistic areas. Living in Vienna, Dr. Spitzer knew French, Hebrew, German, and Hungarian by the time he was seven. He subsequently added Latin, Greek, English, Italian, Provençal, Spanish, Portuguese, Catalan, Romanian, Gothic, Anglo-Saxon, Sanskrit, Lithuanian, Old Church Slavonic, Albanian, and Neogreek. At the age of 48 he learned Turkish, and nine years later he took on Russian.

"But I really *know* only two," he says, "German and Latin. To speak many languages is of little importance to the scholar in linguistics. He needs a theoretical sense for language as such, which comes only from systematic comparison of languages. Theoretical knowl-

edge is quite different from a practical speaking knowledge. Similarly, I have known great mathematicians who were worse than I at elementary multiplication."

LEO SPITZER was born in Vienna in 1887. His father was a wealthy Jewish merchant who never quite liked being a business man (he called Mercury "the god of trade and thieves") and encouraged his son to enter a profession. The Jewish religion was a strong influence on both father and son. "My father was not particularly pious. He was a liberal, care-free, jovial Viennese, but he never thought of deserting his faith. We fasted on the Day of Atonement, and on the high holidays we went to the synagogue together.

"For a few years I was deeply impressed with the religious ceremonies of the synagogue and I wanted to be-

come a rabbi. But when I learned more of classical antiquity, I found that Horace and Sophocles spoke more to my heart than did the Psalter and the Prophets. Later Ronsard and Racine, Dante and Calderón came into my life.

"But the profound imprint of Judaism remained. It is monotheistic; like the giants Freud and Einstein, I found my thinking influenced toward the tracing of things to a single origin."

At eighteen, Leo Spitzer graduated at the top of his class from Vienna's Franz-Joseph-Gymnasium, receiving a bachelor of arts degree. He went to the University of Vienna to study with Meyer-Lübke, the great professor of Romance philology. At first he had a desperate time analyzing four Romance languages in which he had no experience, but the wide cultural background he had received at the gymnasium enabled him to assimilate an enormous mass of knowledge despite this language difficulty.

After winning a doctorate from Vienna he spent a year studying in Paris ("The French professors were marvelously cordial to foreigners, and I was constantly impressed by their learning and their elegance of mind"), a semester in Leipzig ("learned but drab"), and another in Rome. "I had no thought of professional scholarly work. I would be an amateur. I would do nice things, read and write on philology, but I would do nothing in the way of a career."

He returned to Vienna where, to his great surprise and pleasure, Meyer-Lübke invited him to become a *privatdocent*, an unsalaried university lecturer. But the next year was 1914, and Dr. Spitzer was drafted into the Austrian army.

"I had the good fortune to be called to a bureau of censorship and put in charge of an Italian department. All correspondence from and to prisoners-of-war went through Vienna. And the letters proved to be fascinatingly interesting from the point of view of linguistics.

"These Italian soldiers were simple people, yet they had astounding literary talent. Among all the correspondence I saw, the Italian letters were the most naturally artistic. This was the first time that the inner life of a whole nation had been displayed before me. It was wonderful! The letters were filled with love and, unfortunately, hunger,

but love and hunger turned simple country boys into universal poets."

The end of the war left Austria in disaster. The elder Spitzer had died and left his son millions, but the fortune was soon devoured in the inflation of the early '20's. Now married and with a son, Dr. Spitzer was working, on an infinitesimal salary, at the University of Bonn. "It had looked as though I were cut out to be a noble parasite. It turned out I was just a worker. This was the better thing."

In 1925 Dr. Spitzer was called to his first full professorship at the University of Marburg in Germany. The small university town, like the Heidelberg of tradition, was a delight. Both professors and students were young. "There was drinking and carousing and noise. Every Saturday afternoon we would all get together and go dancing at a cafe, high on the mountain overlooking the town. And amid the simple gaiety, serious study thrived."

After five happy years at Marburg, Dr. Spitzer took an appointment at the University of Cologne, which was being enlarged by Konrad Adenauer, then the energetic mayor of Cologne. "I got an amazingly high salary, but no true scholarship could be accomplished in the atmosphere of Cologne. Life was too satisfactory. Many professors were interested only in the cars and wine that their new prosperity could buy. Many of the students were conscripted

Continued on page 26

NEWS at Johns Hopkins

A digest of developments at the University and Hospital in recent weeks

NEW PLASTIC SURGERY

A new plastic surgery technique has been developed which largely overcomes the disfigurement resulting from removal of mouth and pharynx cancers. A mesh of tantalum is used to press new skin over the wound and hold it firmly until the skin has begun to grow.

The method was developed at Hopkins by Milton Edgerton, assistant professor of plastic surgery, and Grant E. Ward, associate professor of surgery. Based on a principle established by William S. Halsted, Hopkins' first professor of surgery, the technique was announced at recent medical meetings commemorating the centennial of Dr. Halsted's birth.

Surgery for mouth cancer has been practised very little because of the large danger of infection in mouth wounds and because of disfigurement of the face. New antibiotic drugs have been found to combat the infections, and the plastic surgery is expected to overcome the disfigurement. The surgeons pointed out that better anesthesia and an adequate supply of blood from blood banks further enhance the chances of successful operations.

BOOKS

Walter R. Agard, fel. '23–'25 (Archaeol.): *Classical Myths in Sculpture.*

Majid Khadduri, professor of Middle East studies, School of Advanced International Studies: *Independent Iraq.*

George H. Preston, B.A.'11, M.D.'15: *Should I Retire?*

PHOTOGRAPH BY BLAKESLEE-LANE STUDIOS

John B. Whitelaw, fac. '47–'51: *The School and Its Community* (The Johns Hopkins Press).

Essays Honoring Lawrence C. Wroth, B.A. '05 (ed. by Wilmarth S. Lewis).

DEATHS

(*Dates are 1952, unless otherwise noted.*)

William Willis Anderson, M.D. '16, fac. '18–'19, February 2.

Rodney J. Brooks, trustee of the Johns Hopkins University, February 23.

Francis Dana Coman, M.D. '24, fac. '24–'30, '31–'38, January 28.

John Hooper Edmondson, B.A. '93, g. '94–'95 (Hist.), February 7.

Edgar D. Freeland, '02–'03 (Arts), December 20, 1951.

Edgar Erskine Hume, M.D. '13, Dr. P.H. '24, January 24.

Robert Hayne Johnson, g. '01–'04 (Greek), January 25.

Jennings Lipe Lincoln g. '13–'14 (Biol.), M.D. '18, January 21.

Joseph Francis Merrill, Ph.D. '99 (Physics), February 3.

Hardy Phippen, g. '90–'91 (Pathol.), January 7.

B. Swayne Putts, B.A. '02, M.D. '06, January 31.

Jessie B. Rawls (Mrs. Leslie), B.S. '29, g. '30–'32 (Educ.), November 18, 1951.

George Bismarck Sanderlin, g. '00–'05 (Engl.), January 26.

Reginald Oliver Sellman, B.A. '08, M.D. '12, January 25.

Jan Stephanus van der Lingen, Ph.D. '21 (Physics), June 29, 1950.

Willis Hamel Wilcox, g. '08–'09 (Engl.), December 26, 1951.

Julian O. Wilke, M.D. '22, January 14.

Martin Bryan Woodward, M.P.H. '33, March, 1951.

Luke V. Zartman, M.D. '10, December 5, 1951.

THE ALUMNI

Arthur St. Charles Dunstan, g. '91–'92 (Physics), has retired after fifty-two years as head of the electrical engineering department at Alabama Polytechnic Institute.

Warren H. Lewis, M.D. '00, fac. '01–'40, has been elected a foreign member of Accademia Nazionale dei Lincei, Rome.

Barney Brooks, M.D. '11, has been made professor emeritus of surgery at Vanderbilt Medical School.

Robert F. Loeb, fac. '20–'21, has been elected a vice president of the Association for Research in Nervous and Mental Disease.

Katharine Dodd, M.D. '21, fac. '22–'23, has been appointed professor and head of the pediatrics department at the University of Arkansas School of Medicine.

Earle K. Plyler, M.A. '23 (Physics), has been appointed head of the radiometry section of the Atomic and Radiation Physics Division, National Bureau of Standards.

H. Houston Merritt, M.D. '26, has been elected president of the Association for Research in Nervous and Mental Disease.

Charles F. Geschickter, M.D. '27, fac.

'30–'40, has been awarded the Legion of Merit Medal for outstanding service in preparing a reference book on pathology for the armed services.

Johannes H. Bruun, Ph.D. '29 (Chem.), has been made director of commercial development for the General Aniline and Film Corporation, New York.

Rachel L. Carson, M.A. '32, g. '32–'33 (Zool.), has been awarded for her book, *The Sea Around Us*, the 1951 gold medal in non-fiction by the national book publishing industry.

John Theodore Rettaliata, B.E. '32, Dr. Eng. '36, has been named president of the Illinois Institute of Technology.

Samuel O. Jones, Ph.D. '36 (Chem.), has been made director of chemical engineering research for the R. J. Reynolds Tobacco Co.

Francis D. Murnaghan, Jr., B.A. '41, has been appointed assistant attorney general for the State of Maryland.

James D. Scott, fac. '41–'46, has been named professor of advertising at the University of Michigan School of Business Administration.

Frederick C. Heath, M.P.H. '49, has been appointed assistant director of public health for the District of Columbia.

Archibald V. Hill, D.Sc. (hon.) '50, has been made president of the British Association for the Advancement of Science.

Joseph Anthony Moran, '50–'51 (SAIS), is an attache in the American Embassy in Havana.

The Cataract Problem

Continued from page 15

mature. Such a condition may make the later operation especially hazardous and difficult.

With these facts in mind, the rule remains that operation may be performed whenever vision is reduced below the patient's individual needs. In bilateral cataracts, both eyes should be operated upon as closely together as possible, usually within a few weeks of one another, so that the patient may have binocular vision with the attendant advantage of depth perception.

WHAT is the operation for cataract? The first planned extraction of the crystalline lens for cataract was done by Jacques Daviel in France, just over two centuries ago. Minor variations in the original operation were introduced at various times in the next century. Thereafter, up to about twenty years ago, the operative technique for cataract was almost unchanged.

In the old operation, the surgeon relied on cocaine drops instilled in the eye for his anesthesia. The eye was opened at the junction of the cornea and sclera with a flat knife that entered the eye on the side nearest the temple, was carried across the anterior chamber, and pierced the external tunic on the nasal side. Then with a sawing motion the section was completed, opening the upper half of the eye at the junction of the cornea and the sclera.

The iris was then grasped above with forceps, drawn out of the wound, and a small piece excised to afford greater room for the removal of the cataract. The capsule of the lens was then opened with a sharp-pointed knife, pressure made on the lower pole of the opaque lens, which then separated from the capsule, the upper pole tilting forward into the incision, whence by counter-pressure it was expressed from the eye. The pillars of the iris were replaced. The eye was not sutured; the pressure of the lids was counted upon to hold the wound edges in apposition. The patient's head was then kept immobilized for a period of four to ten days to allow the wound to heal firmly.

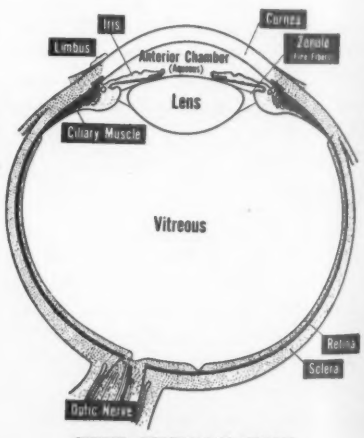
In this operation the capsule remained in the eye. This often became opaque—the so-called "after-cataract"—which required a second operation to open a hole through which rays of light might pass.

WITHIN the past two decades the entire technique has been changed, vastly for the better. Anesthesia is now obtained by an injection of novacain and adrenalin back of the eye, blocking the ciliary ganglion which transmits the sensory nerves to the eyeball and the motor nerves to the muscles around the eye. The muscles of the lids are likewise blocked by injection of the lids with novacain. Proper sedation is obtained by giving barbiturates before operation. The patient is brought to the operating room, relaxed and easy in his mind, usually pleasantly sleepy. The eye is completely insensitive, and both the lids and the eye are immobile.

A suture is then placed beneath the upper muscle which moves the eye, in order to allow the surgeon to move the eyeball as he may desire. The conjunctiva—the thin mucous membrane covering the eyeball and lining the lids—is then incised over the upper half of the eye and a conjunctival flap turned back over the cornea. A non-penetrating incision is then made at the limbus—the junction of the cornea and sclera from nine to three o'clock above, forming a groove and marking the site of the final incision. Sutures are placed in this groove between the firm cornea on the one hand and the sclera on the other. These pre-placed sutures are then pulled aside, out of the groove, to allow passage of the knife which makes the final incision.

The corneal incision is then made either with a flat knife (as in the old operation) or with a spade knife entering the eye above, in the center of the groove. Once the eye has been opened by either method, the incision is widened along the groove until it is large enough to permit passage of the lens. A small opening is then made in the iris to facilitate passage of the aqueous from the posterior to the anterior chamber.

The pupil has already been dilated. Smooth capsule forceps are now introduced into the anterior chamber and carried beneath the iris at six o'clock, and the lens capsule is grasped at its lower pole. By rocking the lens and with counter-pressure, the fine fibers supporting the lens are ruptured. The lens is then "tumbled," the lower pole being brought upward and forward through the pupil, into the wound above. By continued rocking and counter-pressure, the upper supporting zonular fibers are ruptured and the lens delivered intact and *in toto* in its capsule. The iris is carefully stroked back into normal position. The pre-



THE HUMAN EYE

MATHIESON CHEMICAL CORP.

Thomas S. Nichols

Mr. Nichols, president of the Mathieson Chemical Corporation, has been named chairman of the national executive committee of the Johns Hopkins Fund. He will direct the national phase of the Fund's campaign, which is beginning this year.

placed sutures are now drawn tight and tied. The conjunctiva is closed with a running suture. Drops are instilled in the eye to contract the pupil, a dressing is placed on the eye, and the patient is returned to his ward.

The outstanding points in this operation are the pre-placed sutures, which give firm and watertight closure to the wound; the complete removal of the lens and capsule, which obviates the possibility of after-cataract and the need of any later operation; and the preservation of a round pupil, which gives a normal appearance to the eye. With the firm closure of the wound it is no longer necessary to immobilize the patient. Within a few hours he may sit up and have bathroom privileges. After twenty-four hours he may begin to walk, although strenuous exercise is discouraged for several weeks. The sutures are usually removed on the twelfth day and the patient discharged from the hospital the next day.

With this modern operation, operative complications and post-operative difficulties have been reduced to a minimum. Approximately ninety-seven per cent of the patients with uncomplicated senile cataracts recover normal or nearly normal central vision. The long period of waiting, with partial and increasing blindness, is obviated. The long post-operative immobilization is no longer necessary. Post-operative astigmatism is reduced to a minimum. Finally, the visual results are statistically vastly better than with the old-type operation, and the incidence of later complications, secondary glaucoma, post-operative inflammation, and detachment of the retina, is greatly less.

But while modern ophthalmology has made great strides in the perfection of the cataract extraction operation, and the sad lot and ordeal of the patient are greatly ameliorated, he does not escape totally unscathed from his affliction. After the most successful of bilateral cataract extractions, the patient must go through a stage of re-adjustment and re-education.

First, he is afflicted with the necessity of wearing heavy glasses the balance of his life. True, he can escape this for a few short hours at a time by wearing contact glasses, but for constant use these are not yet practical. The heavy glasses rarely break, but on account of their weight they require frequent adjustment. When he first receives his correcting lenses, the patient is bothered with spherical aberration: straight lines bend at the ends, door jambs appear curved, the world is sinuous rather than upright. To avoid this, he must learn to move his head and not his eyes, holding these steady so he looks only through the center of his glasses.

Second, he finds that familiar objects have increased greatly in size. This increase in size brings with it at first a sensation of false orientation—a transient inability to judge distances, with an attendant clumsiness. Gradually he learns to judge distance correctly, and finally he learns to coordinate fine movements with his newly acquired vision.

There remains one difficulty that is never overcome. This is the limitation of the visual field incident to the magnified image. Reading is delightful. All objects directly in front of him are clear, vivid, and distinct. But on each side is a zone in which all objects are blacked out. The result is that the patient bumps into people and objects in the blind field. No amount of training can obviate this limitation of the field.

Gradually, however, the patient who has been successfully operated upon for cataracts learns to plot his course and adapt himself to this handicap, and wins through to years of comfortable and tireless vision. The limitation of vision is only notable for relatively close objects; beyond twenty feet, the visual field opens up. One can drive an automobile with ease.

Thus, with modern surgery, cataracts are no longer to be feared and dreaded. In fact, if one must lose his vision, by all means should he select cataracts, were the choice possible, as the end to this goal. Blindness from cataracts is only temporary; whenever the curtain between the retina and outside world becomes too dense, it can be removed with great chance of success. The operation is not painful or especially hazardous. The convalescence is short and not unpleasant. With only the minor handicaps of readjustment to a new and magnified vision, of wearing rather heavy correcting glasses, and the annoyance of a limited visual field for intermediate vision, the patient with cataracts can look forward to years of clear, and thoroughly useful vision.

New Plans At Hopkins

Continued from page 5

this level. Most of all, we are confident that this foundation will be excellent for those who wish to carry their education to an advanced degree. That, let me reiterate, is our goal.

What about performance of future graduates on their jobs? Will they stack up well or badly in comparison to engineering graduates from other schools? Insofar as masters and doctors are concerned, we have no fear; they will be educated men. We do not feel any real fear at the bachelor's level, either. These men may not have quite the initial facility at the drafting board, with a transit, on a filter press, or in handling a stop watch, that their counterparts from other schools will have learned in college. But we think that they will acquire these techniques quickly on the job and then have a firmer base on which to build an engineering career. The proof of that particular pudding must, of course, await the eating thereof.

At present the School is in the period of transition. Students now in residence can take their choice: they may continue with the conventional

curriculum, or they may adopt the new program with its greater freedom and emphasis upon fundamentals. Most of the upperclassmen, who are well along on the old basis, are continuing with that curriculum; but a gratifying number of freshmen and sophomores seem to like the new idea very much and have adopted it for their own. Most of these, I am happy to say, are aiming toward an advanced degree.

ALL of this sounds very new and, I think, some of it is. The breaking-down of the old undergraduate-graduate barrier, the introduction of greater freedom for the student, the encouragement of a spirit of inquiry, the possibilities for acceleration—all may have elements of innovation. But that part of the idea which involves emphasis upon science and general culture is not new at all. John B. Whitehead, founder of the School, stated in 1914 shortly after the school had opened:

"The general character of the new course may be understood from a comparison with those of five of the better-known schools of engineering in the East, on a basis of the proportion of the total time allotted to each subject. This comparison has been made in detail for all subjects. For the purposes of this discussion, all the subjects may be divided into three groups: (1) general educational and cultural studies; (2) scientific studies underlying professional courses, being principally mathematics and physics; and (3) professional studies.

"In the new course in the Johns Hopkins University the studies of Group 1 consumes twenty-four per cent of the total time; the percentages in the five institutions studied vary from two to sixteen per cent. For Group 2 the percentages are Johns Hopkins, forty-two per cent; other institutions, from thirty to forty per cent. For Group 3, professional studies, Johns Hopkins has thirty per cent, the other institutions from forty-five to fifty-eight per cent."

This was the program of a very wise man at the very beginning of the University's School of Engineering. What we propose now is, in reality, merely an extension of it.

WE make no pretensions of superiority on our part. We are not striving to revolutionize all engineering education; we would do that which is best for the profession on the part of a single institution. The Hopkins School of Engineering is small enough to be flexible. We have a rich scholarly tradition which has emphasized research and advanced training from the first. Our alumni are loyal and cast in a mold of scholarship rather than football. We have on our faculty such engineers as Whitehead, A. G. Christie, and Abel Wolman as examples of high scholarly attainment. With resources and traditions such as these, we build now for the future.

Professor Spitzer

Continued from page 21

from the unemployed of the city and, lacking scholarly interest, about half of them failed out.

"It was Hitler, busy 'reforming' the universities, who sent me traveling. Now, you know that it was just as difficult to dismiss a professor in Germany as it is to dismiss a Federal judge in this country. But one day the university received a telegram from the Minister of Public Education with the information that I was to take a 'leave of absence'. I decided to leave the country immediately."

He was offered a job by the University of Manchester. His English had been sadly neglected, but ten days of reading the London *Times* and talking with an English exchange student developed a satisfactory facility. He turned down the job because of the elementary courses he was expected to teach and, "with brazen confidence," waited for something better to turn up.

MEANWHILE Kemal Atatürk, the leader of the new Turkish republic, was engaged in reforms of his backward country. His particular interest was in building up a good educational system, and for a faculty he looked to the ousted professors of Germany and Austria. The arrangements were carried on through mysterious phone calls from Switzerland which carried a strong air of melodrama. Dr. Spitzer was one of those selected to go to the University of Istanbul, and in the fall of 1933 he and his family sailed for Turkey.

His job there was to be a very considerable task. He was the only philologist on the faculty and was expected to organize classes in four languages for three thousand students. Not yet able to speak Turkish himself, he lectured to his classes through a French interpreter. To his own assistants he had to speak now French, now German, now English.

The Faculty of Letters was housed in an old palace which had once belonged to an Egyptian princess. "The rooms were huge and magnificent, though the plaster was likely to fall on our heads. I opened my office with a golden key. It was a room the size of a ballroom from which one could look down to the blue Sea of Marmara. At every door there stood beadles ready to take orders. But, unfortunately, there were almost no books. I finally asked the dean about this shortage and he replied simply, 'We don't bother with books. They burn.' I later realized that there was some justice in his view, for most Istanbul buildings were wooden and the fire department was hopelessly disorganized." Dr. Spitzer had built up a private library of some size, in which he takes great pride. Books not only occupy every available inch of space in his own office, but overflow into two adjacent rooms in Gilman Hall. But these could not begin to take care of Romance studies at Istanbul.

It was a great relief when, after a year in Turkey, he received an invitation to join the Johns Hopkins faculty. He had a three-year contract to finish out in Istanbul, but Hopkins agreed to hold the chair open and Dr. Spitzer came to this country in 1936. Hopkins was greatly to his liking, for he was asked to do no administrative work and could put all of his energies into re-

Unauthorized persons, usually photographers claiming to represent The Johns Hopkins Magazine *and the Johns Hopkins University, have recently been approaching readers of this magazine on the pretense of seeking permission to make portraits "for the Johns Hopkins files." Readers, particularly in the New York City area, are cautioned against granting such permission, since the photographers in question have no connection with the University and are engaged in an unscrupulous sales scheme. Photographers should be asked to show credentials.*

The Halsted Centennial

Two national organizations—the Society of University Surgeons and the Society of Clinical Surgery—joined with the Halsted Club recently in marking the hundredth anniversary of the birth of Johns Hopkins' first professor of surgery, William Stewart Halsted.

During the four-day session at Johns Hopkins, memorial exercises were held and Dr. William F. Rienhoff, Jr., associate professor of surgery (*left, above*), presented a bust of Dr. Halsted, accepted by Dr. Edwin L. Crosby, director of the Johns Hopkins Hospital (*right, above*).

Dr. Réne Leriche of Paris (*right*) spoke at the Halsted Centennial Dinner.

JACK ENGEMAN

search and study. ("In Istanbul I could play Caesar, but I was Caesar to a village.")

DR. SPITZER, though an enthusiastic citizen of the United States, is not entirely in agreement with its educational programs; for example, the present trend away from Latin is, to his thinking, a great mistake. Without Latin it is impossible to understand properly the greater part of the English language. This language has more Latinate words than any other, and he believes that the English-speaking countries should be the last to cut down the study of Latin. Many an American college boy hates languages.

"Why? I have often asked myself about this. In Europe, any one language has limited currency since foreign countries are almost at your doorstep.

"But here we have one continent with one language predominant. So why learn another language? That may be the instinctive reasoning of the college boy.

"America's happy history has produced in the average citizen an attitude of political isolationism which entails a feeling of linguistic self-sufficiency—a feeling which remains despite our present internationalistic political policies. For a linguistic isolationist there exists no inner urge to study ways of expression not his own. The American way of life seems to admit no relativism, linguistic or otherwise. To study foreign languages as such—not for practical, commercial, or military reasons—will prove a great lesson to the inveterate absolutist. For he will find that man can express himself excellently in many languages, in ways peculiar to each language, all different yet none inferior."

Although Dr. Spitzer does not seem to be making much headway in making the average American schoolboy more language-minded, his influence among scholars has been immense. The late Spanish poet and Hopkins professor Pedro Salinas called Dr. Spitzer's office "the great dwelling-place of philology. One descends into it in order to ascend to illuminating light. One accepts its semi-obscurity because it is the center from which is to come the final light. . . . Spitzer is more than a mortal human being; he is an undying lesson and example." And Schuchardt, the great European scholar, once stated, "I have never been influenced by anybody as much as by this man who is forty years my junior."

DR. SPITZER regards himself as primarily a humanist, "devoted to man and to an understanding of man. The humanist should live among his fellowmen. He should not lose contact with them, for then he would be no longer humane himself; but he should live somewhat removed from them. He stands at the window of our national civilization before which opens the vista of other civilizations. And he *is* that window, which looks outside, not into the room."

Dr. Salinas compared him to an alchemist, extracting "French acceptations from Greek meanings; he goes from the alembic of etymology to that of semantics, and from trial and error to verification, until he has judged precisely the ultimate reality of a word. He throws them into his crucible—words, variants, correct forms, phonemes, roots. He submits them to the patient and powerful flame of his keen intelligence. He seeks their rare essence, and thus he goes on transforming the metals until he comes upon a glowing new interpretation, a virgin clarity of the idea transcending the letter."

Dr. Spitzer himself does not take his work quite so solemnly. One of his admirers tells of once entering the office and asking, "How are you, sir? Working as always?" Dr. Spitzer turned quickly to answer, "Working? Not at all. Enjoying myself as always."

Framework For Peace

Continued from page 17

for peace might be constructed. I have no great confidence that the framework I offer is of the proper substance or texture, but I am absolutely certain that a sound framework is desperately needed. For a total program for peace requires the participation and allegiance of millions of people of widely varying culture; their judgments will in the end prevail; there must be an over-all plan within which all interdependent parts may be developed, no matter how gradually.

THE construction of peace may be divided into two time-periods.

The first period involves emergency programs designed primarily to prevent aggression and thus buy time for more fundamental development.

The second period, beginning with the first but projecting into the mists of future time, involves the much more tedious and intricate task of building permanent peace.

The emergency period must be characterized largely by sheer power. We face an enemy of keen intellect and a cunning understanding of human nature. But his basal instincts are primitive. The primitive has respect only for power—power superior to his own. In this respect, our first problem is much like that which Governor Bradford faced when Canonicus, chief of the Narragansetts, sent him a snakeskin filled with arrows. If Bradford had hesitated, the Indians most likely would have attacked; but he understood the primitive mind. He promptly returned the snakeskin filled with powder and shot, and the Indians did not attack.

We must be strong in military power. For a generation or more we may have to maintain a large military establishment and be prepared for all-out mobilization should that be required. We must use this power to put down aggression in the East and to cooperate with our friends in Europe and elsewhere for the protection of our civilization. Even in sheer economic terms, it is cheaper to cooperate with our friends for the maintenance of our way of life than it would be, alone, to build a Gibraltar of the Western Hemisphere. And such a Gibraltar is an illusion at best. If we surrendered Europe and the Middle East to Russia, she then would have superiority of manpower, natural resources, and production. The United States would not long exist as an island of freedom in a sea of communism.

Military strength must of course be matched by intellectual, moral, and economic strength. There are terrible intellectual and moral weaknesses in our national fabric today, but they are obvious to all; and for brevity I turn at once to the need for economic strength.

THE public economy, including the military, can be supported only by the private economy. If through ignorance, carelessness, or stubbornness we permitted a weakening of the private economy, our whole effort domestically and internationally would collapse, with frightening consequences.

We have not, I think, taken the steps essential to the maintenance of economic stability and strength. Here I do not point a finger at a partisan group, but at all of us.

The intense specialization which characterizes modern life has given us a verticalized society in which one segment often seems not to understand other segments.

I worked in Washington for nineteen years. I saw hundreds of special-interest groups seek benefits for themselves and urge the elimination of benefits to others. But I never saw a group ask for the cancellation of its *own* special benefits. If these verticalized efforts add up to the national interest, it is purely coincidental.

Many things must be done to protect our economic strength, each of which calls for organized unselfishness. Certainly we need to eliminate all non-essential expenditures, both public and private. Yet the Federal government is spending tremendous sums on post-ponable projects, such as the reclamation of new lands. Agricultural expenditures are also very large, even though the original goal of parity income for farmers has, on the average, been an actuality since 1942. Expenditures in other fields follow a similar pattern. It seems highly probable that a firmer fiscal policy might have yielded greater defense and more effective aid to foreign countries; prudent fiscal management might well have held the cost of a bomber at two million dollars instead of the present cost of three and a half million dollars.

OTHER efforts to prevent inflation have been as ineffectual as our control of expenditures. Agriculture understandably objects to price control at less than parity for each individual crop; labor naturally objects to wage freezes if the cost of living rises; industry logically objects to wage increases unless prices also go upward. The

COURTESY TRINITY COLLEGE

Hopkins Men At Trinity

With Arthur H. Hughes (second from right), *named last year as acting president of Trinity College at Hartford, Connecticut, are four other Johns Hopkins alumni on the Trinity faculty: Louis H. Naylor, professor of Romance languages; Gustave W. Andrian, assistant professor of Romance languages; LeRoy C. Barret, Hobart professor of classical languages, emeritus; and* (far right) *Roger Shaw, assistant professor of history.*

vicious circle that could lead to a terrible weakening of our economy grows and expands; the twin demands of high prices and taxes now bear so heavily on millions of people that a tax revolt is threatened, particularly at the local and State levels where indispensable public services are financed.

We need some austerity of our own: the American people must realize that if we are to shift as much of our energies and production to defense as the emergency requires, then we must give up something else.

Economic instability or collapse in the United States could lead to a loss of all our freedoms—our interdependent political, personal, and economic freedoms. Such a calamity here would be followed by similar disasters in most countries of the world. Then the communists could readily reach their goal.

Yes, we must develop and maintain military, economic, intellectual, and moral strength, and thus buy precious time. Using this time, we must roll up our sleeves and go to work on a positive program of building enduring peace.

At this point, it is well that we are far above the earth to maintain perspective, for if we were closer we would insist upon analyzing a hundred major categories of human activity. But as the modern artist develops on his canvas only the colors and form which are essential to the communication of his central meaning, so too may we now produce our picture with a minimum of broad strokes.

I suggest that a permanent program for peace may be considered under four general, interdependent headings, each including a vast field of human activity.

One of these involves the building of that genuine understanding among the peoples of the world on which all other cooperative effort may be based. Unfortunately, this kind of understanding does not today exist in any nation of the world.

All of us need to understand the nature of the modern intellectual and moral struggle. It began a great many years ago. It built up with bewildering rapidity during World Wars I and II, and has reached a climax now. It is a conflict, essentially, between those who believe in and wish to abide by the cardinal concepts of our Judeo-Christian heritage, and those who at the outset reject such principles—as Marx did, and as Lenin did, and as Stalin does today.

Another aspect of the intellectual task is for us to come to understand peoples of other nations and cultures *as people*. We must know their histories, their problems, their hopes, their aspirations. And they must thus know us. Otherwise, we cannot undertake the third phase of the intellectual task, which is to develop a deep and thorough comprehension of those specific economic, social, and psychological situations which often are determining factors in the ever-present issue of peace or war.

Most of the peoples of the world have not even a modicum of understanding of us as individuals or as a nation. They think of us as being all rich through no fault or effort of our own, night-clubbish, frivolous in our outlook upon the rest of the world, and imperialistic.

The real America has been hidden from them. They know nothing about the simple life that surrounds the rural churches of America. They know very little about the operation of our school system, or about the working of our municipal, State, and Federal governments. They know essentially nothing about the America that is self-critical, and generous, and reverent.

Indeed, we have been trying to sell the American system to the rest of the world by bragging about our material achievements. These achievements are enormously important. But we have hurled our messages into economic and intellectual climates which are so different from ours that the people cannot comprehend the meanings of our words. Thus, instead of creating understanding, we have built envy and near hatred—as in India, for example.

Misunderstanding of our motives is prevalent and far-reaching, even among the leaders of friendly nations. Such misunderstandings are part of a deliberate design. They result from two great forces, one negative and one positive, which are loose in the world today.

The negative force is censorship in a hundred forms. Today, seventy-five per cent of all the people who inhabit the earth live behind walls of censorship. They are permitted to know only what their political leaders want them to know. And while this terrible power is being used—manifest by the iron curtain of Russia and her satellites, and

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the "lace curtains" of the Middle East, Africa, and South America—while this negative force is being used to keep peoples from knowing the truth, the communists with powerful instruments of communication are filling human minds everywhere with treacherous lies, day after day. In forty-two languages, twenty-four hours each day, the insidious spreading of bigger and bigger lies goes on.

In this phase of the world struggle, we of the United States and other free countries have been fighting with popguns and pea-shooters. We should have been dropping intellectual atomic bombs.

A SECOND phase of a long-time program for peace involves enlightened economic cooperation among nations—that type of cooperation which may give peoples everywhere the right to hope that by their own efforts they can improve their present desperate situations. One nation cannot long support other nations. Generous help has been necessary for a temporary period; the productive, scientific, and educational facilities of some nations were so recently destroyed, while others did not so suffer. But in terms of generations of time, this type of cooperation is neither desirable nor feasible. Others do not want our charity, and it will not buy respect.

There are, however, manifold opportunities for economic cooperation, as opposed to economic support, which will help all nations—including the United States.

Had there been effective economic cooperation in China, far back in the early stages of communist development, China today might not be suffering the throes of Russian imperialism. The men on the lands of China, with few scientific practices, produced miserably little, and they were permitted to retain only a part of what they produced. They lost power to resist, and they were not even sure that what they had was worth saving. They know better today. But it is too late.

Hunger exists all over the world. Three-fourths of the peoples of the world are consistently undernourished —two-thirds of them tragically so. Hungry, disease-ridden people do not think first of the great abstractions of life: of freedom, and tolerance, and justice. They think of the elemental business of getting food for themselves and their children who are dying prematurely all around them. The application of scientific practices to the still-productive lands of the world would cost little. Increased production would help them and us—for our world trade is predominately with the more prosperous areas of the globe.

From our point of view, perhaps the most ominous economic problem in the world today involves the relationship of the dollar and sterling areas of the world, primarily Europe and the United States. This is a perplexing, delicate matter of long standing. Rapid deterioration has been evident in recent years. In a thirty-five-year period, between 1914 and 1949, the United States shipped to Europe 101 billion dollars more in goods and services than Europe shipped to us. We gave away seventy-five per cent of the total. This

JOHN A. KELLY, JR.

Dr. Eisenhower addressing the Seventy-Sixth Annual Commemoration Day Exercises of the Johns Hopkins University on February 22, at which he received the honorary degree of doctor of laws.

disparity has been obscured by Marshall and defense dollars, but eventually it will again come to the fore, and a solution is not in sight. That solution is going to call for deeper economic thinking and more intelligent long-range planning than we of the United States usually indulge in. Yet a healthy economic relationship between Europe and the United States is an imperative in any program for peaceful living and development.

These few examples may imply, as they should, that there are tremendous opportunities in the world today for mutually helpful economic cooperation, and that economic cooperation is one of the strategies we must employ in our program for permanent peace.

A THIRD phase of such a program must be political cooperation to settle those disputes which constantly arise among nations and which, if unresolved, might often break into overt hostilities. Their number is legion. To solve them, we need effective machinery for continuous multilateral negotiation.

I do not imply that the traditional exchange of diplomats among nations, primarily involving bilateral negotiation, is obsolete. But this effort must be buttressed by the United Nations, or a strengthened United Nations. For in our interdependent world, almost any problem worthy of discussion automatically affects many nations. Peace is now a cooperative, indivisible enterprise.

Unfortunately, Russia and her satellites have sabotaged most of the good things the United Nations has tried to do. Chaos, tension, and despair serve the Russian purpose better than order and hope. If eventually it becomes clear that Russia will not cooperate, then the remainder of the world will have no choice but to reorganize the present cooperative world structure, with Russia and her satellites excluded. This would be a terrible choice to have to make, for it would guarantee that for generations to come the world would be divided into two armed camps.

The patience which most of the world is exhibiting in this frustrating situation is fully justified. But we should keep alert to danger signs. Human patience can reach a breaking point.

THE fourth phase of a total program for peace involves power. Peace, wherever it exists—in Baltimore, in Pennsylvania, in the United States—is partly the product of power. If adequate power is possessed, it usually does not have to be used. But there can be no peace without it. Social man is an ambivalent being: he is both good and bad. If we tried to construct a social order on the basis solely of what is good in social man, we would only create opportunities for the Tamerlanes, Alexanders, Napoleons, Hitlers, and Stalins of history to take control. We would be fools.

But neither should we seek to depend primarily on power. As I have tried to indicate, our task is to develop the intellectual and moral understanding

The Annual Alumni Banquet

With the Hopkins professors emeriti as special guests, more people attended the annual Commemoration Day banquet of the Johns Hopkins Alumni Association on February 21 than have been present at any such meeting in the past. Gwilym A. Price (*right*), president of the Westinghouse Electric Corporation, was the speaker.

Mr. Price urged that universities "take the lead in a comprehensive drive against economic illiteracy. Our universities," he said, "have given us superb engineers, physicians, chemists, physicists, researchers, scholars. Now we ask simply that they give us a body of graduates grounded in political economy. These will be the men who will be the keepers of the American spirit during the crucial remainder of the century."

The banquet was also the occasion for reporting results of the Annual Alumni Roll Call and the first year's activities of the Johns Hopkins Fund. The former, as reported in last month's issue of *The Johns Hopkins Magazine*, resulted in alumni gifts to the University totaling $120,270. The Fund reported that $4,155,000 had been given to the "assurance fund" of the Hopkins institutions during its first year of operation.

These results of elections of officers of the Alumni Association were announced: President, Edwin B. Jarrett; vice president, J. H. Fitzgerald Dunning; secretary, Jesse Slingluff, Jr.; treasurer, Horace E. Flack. Elected to the executive committee were Paul W. Bachman (representing Ph.D. and M.A. degree-holders), Robert Austrian and Walter B. Buck (representing M.D.'s) Walter E. Dove (representing Dr. P.H.'s, D.Sc.'s, and M.P.H.'s), Charles J. Murphy (representing holders of engineering degrees), and M. Jenkins Cromwell and Karl M. Levy (representing B.A.'s and B.S.'s).

Allan C. Davis, retiring president, presented Mr. Jarrett at the banquet.

JOHN A. KELLY, JR.

Gwilym A. Price

on which economic, political, and even military cooperation may function successfully. At the same time, the United Nations must have power which stands in the service of the kindly people of the world who truly want peace, and which may be used quickly to put down aggression wherever it may occur.

The United Nations is using power in Korea today. The discouraging thing here, however, is that one nation is carrying most of the burden. At the earliest possible moment, the Security Council or the General Assembly, if necessary, must be permitted to have a world police force of its own, with the membership drawn directly from the peoples of all nations, and with the economic burden shared equitably. If this is not done, the generous American people will eventually become discouraged, not solely because so many of our young people are losing their lives, not solely because we are paying so much of the cost, but also because we would feel that the rest of the world is not willing to sacrifice equally for the attainment of common goals and values.

What a tremendous thing it would be for all mankind if the United Nations, equipped with exclusive possession of atomic bombs and a world air force, could actually maintain peace! Under such circumstances, all nations could reduce their own military establishments to the minimum needed for internal security. Back-breaking, poverty-inducing taxation could be lifted. Since the dawn of civilization, from a third to a half of man's total efforts have gone to wasteful ends; what a glorious world this could be if human effort could be directed exclusively toward constructive purposes!

We are today engaged in both the emergency and longer-term tasks of peace. But too many of our actions today are taken fortuitously without, it seems to me, consideration of the need for consistency in the whole—for adherence to a logical pattern. Nor is the program for peace, *if such exists*, understood by the man on the street. That is a terrible, frightening shortcoming. In a very real sense—in agriculture, labor, industry, finance—international policies and program are merely extensions of domestic policies and programs. While the President and State Department may have primary responsibility for guiding international policies and actions of our country, those policies and actions are actually determined day after day by the judgments of all citizens. And so I emphasize that education of each individual right here at home is an indispensable part of a consistent effort to build peace.

I suggested in the beginning that our present problems are no more difficult than those we have solved in the past. I should like to conclude by saying that there are many hopeful signs before us at this very hour.

First, we are building some of the power necessary to buy time.

Second, Russia's maintenance of the iron curtain is dramatic notice of internal weaknesses which should be neither overrated nor underrated. Russia does not dare permit her own people to know how much better off are all the rest of the peoples of the world. Further, she is now involved in an attempt to control eight hundred million human beings, only a relatively few of whom are communists. *She, too needs time.* Our weaknesses are evident for all to see; Russia's are not. But they are sufficient to justify my saying that we need not suffer from hysterical fear. The iron curtain reminds us of that.

A third cheering factor is the economic recovery of Europe. Only five years ago Europe was prostrate. Today European production is about 130 per cent of what it was prewar. Standards of living are rising. With economic recovery is coming new hope, heightened morale, greater courage.

Fourth, Europe is rearming. The cooperative effort for the defense of Western civilization is growing, not so fast as we would like, but at an encouraging rate.

Fifth, despite all impediments, truth *is* spreading. The United States, Great Britain, France, and other free countries have increased both the power and the effectiveness of their information and educational services to all mankind.

Sixth, and perhaps the greatest reason for optimism, is the simple fact that in this historic struggle justice and morality are on our side. We want no special benefits for ourselves. We do not seek to control other peoples or their resources or their territories. We

THE MONTH at Johns Hopkins

A calendar of events:
March 25—April 30

DRAMA

CHILDREN'S CRUSADE FOR FREEDOM—dramatizations of international instances in which children have been a force for freedom. Children's Educational Theater, Sat., Mar. 29; the Johns Hopkins Playshop, curtain 10:30 a.m. and 3 p.m. Single admission: children $.35, adults $.80. Tickets may be obtained from the Bonney Concert Bureau, 327 N. Charles St., Baltimore 1.

THE COMEDY OF WILLIAM SHAKESPEARE—George Winchester Stone, Jr., professor of English, George Washington University. A Drama Evening sponsored by the Johns Hopkins Playshop. Mon., Apr. 7; Levering Hall; 8:30 p.m. Admission, $.60.

QUEEN AFTER DEATH or HOW TO KILL WOMEN (by Henry de Montherlant)—Tues.-Sat., Apr. 22-26; the Johns Hopkins Playshop, curtain 8:30 p.m. Single admission, $1.20. Tickets may be obtained from the Johns Hopkins Playshop, the Johns Hopkins University, Baltimore.

SPECIAL EVENTS

JOHN HINKLEY LECTURES ON ENGLISH CONSTITUTIONAL HISTORY—Mon., Tues. & Thurs., Mar. 31, Apr. 1 & 3; Room 111, Mergenthaler Hall; 5 p.m. Speaker: Robert Livingston Schuyler, Gouverneur Morris professor of history emeritus, Columbia University. Subjects: "Some 20th Century Revisions in English Constitutional History"; "From Mixed Government to Democracy"; "Administration: A Neglected Factor in Constitutional History."

TELEVISION

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ALUMNI MEETINGS

NEW YORK, NEW JERSEY, AND CONNECTICUT ALUMNI ASSOCIATION—Wed., Mar. 26, 6 p.m.; Columbia University Club, New York City. Speaker: Dr. Detlev W. Bronk.

CHEMISTRY ALUMNI—Thurs., Mar. 27, 5 p.m.; Statler Hotel, Buffalo, N. Y. A Hopkins Hour in conjunction with the meeting of the American Chemical Society.

CHEMISTRY ALUMNI—Wed., Apr. 2, 5 p.m.; Schroeder Hotel, Milwaukee, Wis. A Hopkins Hour in conjunction with the meeting of the American Chemical Society.

MEDICAL AND SURGICAL ASSOCIATION—Mon. Apr. 21, 6 p.m.; Hotel Cleveland, Cleveland, Ohio. A dinner held in conjunction with the meeting of the American College of Physicians.

DELMARVA PENINSULA ALUMNI—Fri., Apr. 25. Alumni will be notified of the place and time of the meeting.

MEDICAL MEETINGS

CARDIOVASCULAR SEMINAR—Fri., Mar. 28, 4:30 p.m.; Hurd Hall. Speaker: Dr. John Pappenheimer, Harvard Medical School.

WILMER RESIDENTS ASSOCIATION—Thurs., Fri., and Sat., Apr. 3-5; Hurd Hall.

DELAMAR LECTURE—Mon., Apr. 14; 5 p.m.; Johns Hopkins School of Hygiene.

JOHNS HOPKINS MEDICAL SOCIETY—Mon., Apr. 14; 8:15 p.m.; Hurd Hall. Final meeting.

VARSITY SPORTS

LACROSSE—Johns Hopkins vs. Loyola, Sat., Apr. 5 (away); Virginia, Sat., Apr. 12 (Homewood, 2:30 p.m.); Princeton, Sat., Apr. 19 (away); Army, Sat. Apr. 26 (Homewood, 2:30 p.m.).

BASEBALL—Johns Hopkins vs. Franklin & Marshall, Thurs., Apr. 10 (Homewood, 3 p.m.); Gettysburg, Wed., Apr. 16 (away); Delaware, Sat., Apr. 19 (Homewood, 2:30 p.m.); Washington, Tues., Apr. 22 (Homewood, 3 p.m.); Loyola, Thurs., Apr. 24 (Homewood, 3 p.m.); Swarthmore, Sat., Apr. 26 (away); Maryland, Tues., Apr. 29 (away).

TRACK—Johns Hopkins vs. Washington, Tues., Apr. 8 (away); Delaware, Sat., Apr. 19 (Homewood, 2 p.m.); Franklin & Marshall, Tues., Apr. 22 (Homewood, 3:30 p.m.); Baltimore Relays, Sat., Apr. 26; Gettysburg, Wed., Apr. 30 (Homewood, 3:30 p.m.).

TENNIS—Johns Hopkins vs. American, Wed., Apr. 9 (away); Loyola, Thurs., Apr. 17 (away); Delaware, Sat., Apr. 19 (Homewood, 2:30 p.m.); Gettsyburg, Wed., Apr. 23 (Homewood, 3 p.m.); Western Maryland, Sat., Apr. 26 (away); Maryland, Wed., Apr. 30 (away).

GOLF—Johns Hopkins vs. Maryland, Thurs., Apr. 17 (Mt. Pleasant Golf Course, 1:30 p.m.); Western Maryland, Tues., Apr. 22 (away); Loyola, Fri., Apr. 25 (away); Franklin & Marshall, Mon., Apr. 28 (Mt. Pleasant Golf Course 1:30 p.m.).

Since this issue went to press several weeks ahead of the period covered in this calendar, there may be last-minute changes and additions in the dates and times of events. It is advisable to confirm them by consulting the daily newspapers or by telephoning the Public Relations Office at Johns Hopkins.

adhere to the doctrine of free choice of peoples. We wish to live by the principles of mutuality in human relations and of the equality of all men before their Creator and before the law. We are willing that others should live by *their* principles. In the long run, our moral position will be the decisive influence in resolving the conflict in the minds and hearts of hundreds of millions of people. If it be true, as a British historian has said, that Western civilization is observing the forms and mores founded on Christian belief without actually any longer being Christian, then surely what Senator Margaret Chase Smith has called spiritual security is a new imperative for each of us.

BUILDING peace is patently the job of each individual. Each citizen must educate himself so that he may help devise and maintain a total strategy that can achieve success.

The great trends of history may be likened to the energies of a river. Man can work with the river; he can build dams and dikes and try to cause the energy of the water to serve good ends rather than to destroy. But he cannot stop the water from reaching the ocean.

The same is true of the great trends of history. We can work with them; we can try to have them serve noble purposes. But I doubt that we can stop them.

All the trends of our day are toward the unification of our world. The world is already one, in economic interdependence. It is already one physically, considering the speed of communication and travel. But unfortunately the world is divided into a hundred parts, and especially into two great parts, intellectually and morally.

That is the essence of the problem which today confronts the two and a half billion people who inhabit the earth.

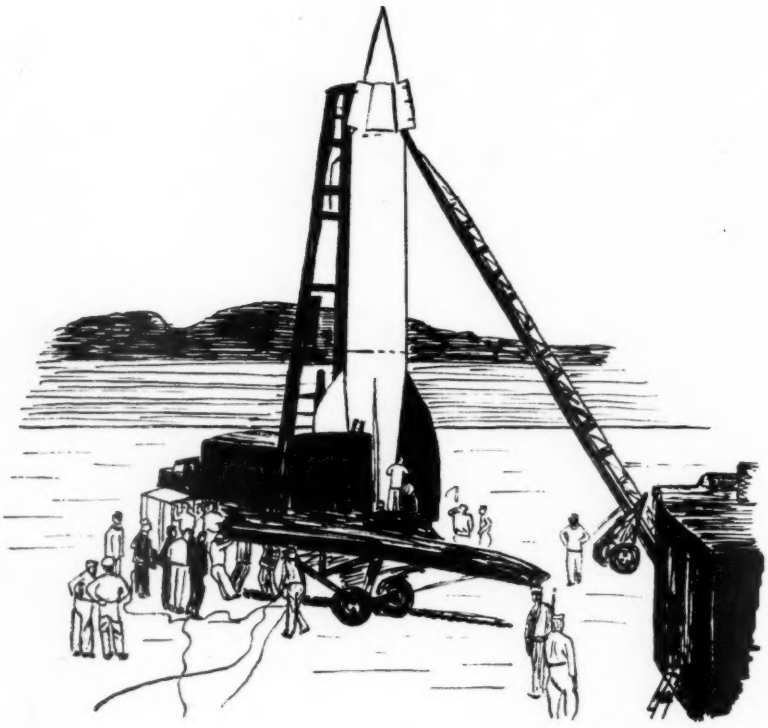
It is time for all nations, if possible, and all free nations without fail, to agree on a program for peace, and to cooperate completely and wholeheartedly in its gradual achievement. The statesmen of the world never had a more urgent assignment than faces them today. The citizens of the world —including every one of us—have never faced a more fateful responsibility for active, intelligent citizenship. I firmly believe that we can help greatly to tip the scales toward lasting peace if we fulfill our responsibility with the utmost in devotion and understanding.

Werner Wolff

NEXT MONTH

The determined-looking young lady above is engaging in an activity which has attracted scores of youngsters to the Johns Hopkins University campus for the past several years: she is chasing fireflies. Firefly-catching, in fact, has recently become a big business for many Baltimore children. Hopkins scientists have needed—and have been willing to pay for—as many of the glowing insects as they could get on warm spring and summer nights, for the firefly holds many secrets which are important to studies of all living things. The story of the firefly chase, and the far-reaching research which prompts it, will be told in text and pictures next month. Look for it in the May issue of

THE JOHNS HOPKINS MAGAZINE



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HIGH-ALTITUDE RESEARCH

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JACOB L. HAIN
Investment Adviser
One North Fifth Street
Reading, Pennsylvania
TELEPHONE: *Reading 4-8389*